

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of:

Promoting Investment in the 3550-3700 MHz
Band

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GN Docket No. 17-258

COMMENTS OF AT&T SERVICES, INC.

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I. INTRODUCTION AND SUMMARY

AT&T Services, Inc., on behalf of the subsidiaries and affiliates of AT&T Inc. (collectively, “AT&T”), hereby submits the following comments in response to the Federal Communications Commission’s (“Commission”) Notice of Proposed Rulemaking (“3.5 GHz NPRM”) in the above-captioned proceeding.¹ In the 3.5 GHz NPRM, the Commission advanced numerous proposed changes to the 3.5 GHz licensing framework that will further its objectives of ensuring that this band keeps pace with technological advancements, creates incentives for investment, encourages efficient spectrum use, and promotes robust network deployment. AT&T broadly supports these objectives and applauds the Commission’s efforts to transform the 3.5 GHz band from an experimental band to one that will further the goal of continued United States leadership in advancing wireless technologies and services.

Many of the 3.5 GHz NPRM proposals are essential to ensuring certainty and promoting investment in the band. As currently structured, the licensing rules for the 3.5 GHz band

¹ *Promoting Investment in the 3550-3700 MHz Band; Petitions for Rulemaking Regarding the Citizens Broadband Radio Service*, GN Docket No. 17-258, RM-11788, RM 11-789, Notice of Proposed Rulemaking and Order Terminating Petitions, FCC 17-134 (2017) (“3.5 GHz NPRM”).

discourage investment in new and innovative services and technologies in the band. Instead, the Commission can promote and enhance both licensed and opportunistic uses by strengthening the licensing rules for the band, providing much needed certainty that will result in strategic investment and subsequent standards and equipment development efforts. These benefits will accrue both to Priority Access License (“PAL”) use and General Authorized Access (“GAA”) use. At the same time, the Commission should ensure that other proposals made in the 3.5 GHz *NPRM* are consistent with the rules and requirements for other spectrum bands.

To promote investment and to be consistent with licensing rules utilized for other spectrum bands, the Commission should therefore adopt ten-year license terms for PALs, with a renewal expectancy. Similarly, larger Partial Economic Areas (“PEAs”) should be used for geographic area licensing, and the Commission can enhance secondary market activity and efficient spectrum use by permitting partitioning and disaggregation. The Commission can also enhance and simplify the auction process by eliminating artificial limits on the amount of PAL spectrum available for prospective bidders while maintaining its well-settled methodology for determining mutual exclusivity. Finally, the Commission should allow auction bidders the ability to bid on specific licenses, restrict the confidential information from being made public by Spectrum Access System (“SAS”) administrators, and limit the unnecessary performance requirements placed upon PALs.

In addition, AT&T encourages the Commission to expeditiously move forward with auctioning spectrum in the 3.5 GHz band. AT&T would note that none of the proposed changes in the 3.5 GHz *NPRM* affect the underlying GAA rules and should not inhibit efforts to complete rapidly the process of opening the band for GAA use. To this end, the Commission should endeavor to complete certification of SAS providers, initiate and finish testing of SAS and

Environmental Sensing Capability (“ESC”), and quickly allow the deployment of GAA well in advance of any actions required for PAL service rules contemplated in this proceeding. By moving forward with GAA use of the 3.5 GHz spectrum in the 2018/2019 timeframe, there will be a well-established ecosystem for devices and infrastructure that will set the stage for an auction of PALs. AT&T encourages the Commission to promptly adopt the proposed PAL service rule changes discussed herein and strive for an auction of PALs by no later than the end of 2019.

II. THE COMMISSION’S PROPOSALS WILL PROMOTE INVESTMENT AND INNOVATION IN THE 3.5 GHZ BAND

A. Proposals to Extend License Terms and Renewal Expectancy Will Ensure Certainty for Both Short-Term and Long-Term Investment in the Band

AT&T supports the Commission’s proposal to increase PAL licensing to ten-year terms with a right of renewal, rather than the existing single three-year term. As AT&T previously noted, this approach is consistent with the Commission’s rules in other spectrum bands, will promote investment by reducing the risk of stranding assets, and will allow for the development of a balanced and robust licensing regime for the entire 3.5 GHz ecosystem.²

Parties who have commented on the petitions for rulemaking broadly support extending the PAL term and creating an expectation of renewal. For example, Ericsson argues that “[t]he current PAL licensing framework, which provides for a three-year license term and no right of renewal, creates the risk that PAL licensees will face stranded investments, will likely diminish interest in PALs, and may undermine the success of the three-tiered sharing regime.”³ U.S. Cellular also contends that the “unreasonably short three-year terms for PALs and the inability to

² See e.g., Comments of AT&T Services, Inc., GN Docket No. 12-354, at 2 (July 24, 2017).

³ Comments of Ericsson, GN Docket No. 12-354, at 6 (July 24, 2017) (Ericsson Comments).

renew PALs for subsequent terms will greatly diminish the attractiveness of PALs because this licensing framework would give rise to an unreasonable risk that licensees' investments in the 3.5 GHz will become stranded.”⁴ Relatedly, T-Mobile expresses concern that the uncertainty and depressed investment created by the licensing framework will harm not only PAL licensees, but also GAA operators by discouraging the creation of a healthy ecosystem for 3.5 GHz devices and infrastructure.⁵

AT&T agrees with commenters that altering the existing rules to allow for more licensing certainty for PALs will enhance the long-term investment possibilities for the 3.5 GHz band. As Verizon correctly observes, “one of the most effective ways for the Commission to promote deployment is to ensure that wireless providers are not discouraged from making the necessary multi-billion dollar investments due to the risk of losing their licenses only a few years after acquiring them.”⁶ Only by extending the current truncated license terms can the Commission encourage investment by PALs, equipment manufacturers, and end users alike. A longer license term will provide the necessary assurances that providers' time testing and developing new technologies will be well-spent, and that consumers' expectations regarding the life cycle of their devices will be met. Moreover, because PALs are permitted to deploy infrastructure equipment at higher power levels, PAL construction and deployment will more closely mirror the network design associated with a large-scale, macro wireless network instead of the low power-type of network that is more likely for GAA deployments. As such, PAL licensees will require

⁴ Comments of United States Cellular Corporation, GN Docket No. 12-354, at 2 (July 24, 2017).

⁵ Comments of T-Mobile USA, Inc., GN Docket No. 12-354, at 5 (July 24, 2017) (T-Mobile Comments).

⁶ Comments of Verizon, GN Docket No. 12-354, at 4 (July 24, 2017) (Verizon Comments).

sufficient time to design, trial, and deploy PAL infrastructure – a timeline that will most likely well exceed the current license terms previously adopted by the Commission.

AT&T disagrees with parties expressing concern that allowing longer license terms and the expectation of renewal will preclude spectrum from flowing to its highest value use. As discussed in greater detail below, the Commission should allow for partitioning and disaggregation of PALs as part of its changes to the 3.5 GHz licensing framework. Doing so would be consistent with the Commission’s approach in other bands and would allow secondary market transactions to determine the best possible use for unused spectrum. In addition, the structure of the 3.5 GHz band permits complementary uses – to the extent PALs are not being fully used in any particular area, GAA services can step in and provide service in any gaps. This framework thus inherently protects against any concerns that spectrum will be underutilized.

B. The Commission’s Proposal to Utilize Partial Economic Areas and Eliminate Spectrum Aggregation Limits Will Provide Necessary Flexibility for Licensees in the 3.5 GHz Band

AT&T encourages the Commission to increase the size of geographic area licenses by using Partial Economic Areas (“PEAs”) rather than Census Tracts. AT&T and others have expressed concern that the Commission’s current rules governing licensing in the 3.5 GHz band create an unnecessarily complex and burdensome auction framework. As Ericsson observes, the current rules “could lead to an unmanageable auction and management of 500,000 separate PAL licenses” for the Commission.⁷ In addition, using smaller Census Tract parcels greatly complicates the ability of PAL licensees to effectively manage interference borders. AT&T estimates that the total shared borders between Census Tracts are nearly eight times longer than

⁷ Ericsson Comments at 6.

the total shared borders between PEAs, increasing the likelihood that interference concerns will manifest if Census Tracts are utilized.

As T-Mobile notes, “PEAs . . . will reduce border areas and minimize the risk of interference.”⁸ AT&T supports this approach for the 3.5 GHz band. Licensing on a PEA basis would reduce both the number of licenses the Commission needs to auction and the number of border areas that PAL licensees will need to manage, greatly simplifying licensing in the 3.5 GHz band, mitigating interference concerns, and promoting effective and efficient spectrum use.

AT&T notes that the Commission has used PEAs with great success in previous auctions. In the 600 MHz auction context, the Competitive Carriers Association (CCA) argued that PEAs were preferable to larger license areas because they “would enable smaller and rural carriers to bid on portions of EAs to obtain more efficiently sized spectrum licenses.”⁹ Utilizing PEAs, CCA reasoned, “would more effectively advance the interests of rural carriers and consumers while also addressing the Commission’s interest in reducing the complexity of the auction.” The Commission agreed with CCA, observing that PEAs would “best promote entry into the market by the broadest range of potential wireless service providers without unduly complicating the auction” because they “encourage entry by providers that contemplate offering wireless broadband service on a localized basis, yet at the same time will not preclude carriers that plan to provide service on a much larger geographic scale.”¹⁰ Using larger licensing areas in the forward

⁸ T-Mobile Comments at 4.

⁹ Letter from Rebecca Murphy Thompson, Competitive Carriers Association, to Marlene Dortch, Secretary, FCC, at 2 (Nov. 27, 2013)

¹⁰ *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, GN Docket No. 12-268, Report and Order, 29 FCC Rcd 6567, 6597, ¶ 71 (2014) (*Incentive Auction Order*).

auction portion of the 600 MHz auction increased auction participation and allowed over 60 parties to bid for spectrum licenses. Ultimately, 50 of these bidders were awarded spectrum licenses, over 75 percent of which received small or rural carrier bidding credits. The Commission should adopt the same tried-and-tested approach to licensing in the 3.5 GHz band.

In conjunction with increasing the size of licensing areas and other proposed changes, AT&T urges the Commission to eliminate the current 40 MHz spectrum aggregation limit. This approach artificially limits the ability of PALs to aggregate channels in the 3.5 GHz band, preventing the benefits of this spectrum from being fully unleashed. The 40 MHz aggregation limit would inhibit the deployment of innovative 5G technologies, for which wider channels are necessary. For example, as part of the Spectrum Frontiers proceeding, the Commission has found that minimum channel sizes of 200 megahertz would be most acceptable for 5G licensing of millimeter wave band spectrum, noting that smaller channel bandwidths “may be insufficient to meet the expected tenfold increases in peak data rates and user throughput without using ultra-wide channel bandwidths of at least 200 MHz.”¹¹ Indeed, in the 28 GHz band, the Commission has allowed licensees to acquire all 850 megahertz of spectrum available in the band.¹² As such, there should be no compelling reason to limit spectrum access in the PAL spectrum that may deter prospective bidders from aggregating sufficient spectrum to deploy 5G services.

C. Allowing Partitioning and Disaggregation of PALs is Consistent with the Treatment of Similar Licensed Services

AT&T applauds the Commission’s proposal to adopt partitioning and disaggregation rules for the 3.5 GHz band. Providing PAL licensees with the flexibility to acquire PAL rights in

¹¹ *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014, 8053, ¶ 95 (2016).

¹² *Id.*, ¶ 72.

smaller geographic areas where their specific business needs dictate would square the 3.5 GHz licensing rules with the Commission's approach in other bands. As the Commission has observed, partitioning and disaggregation "can facilitate the efficient use of spectrum, and expedite provision of service in areas that might not otherwise receive service in the near term."¹³ AT&T agrees with the Commission, as well as the numerous parties that have expressed support for this rule change.

In particular, Ericsson notes that, "[p]artitioning and disaggregation will ensure that any unused PAL spectrum can be assigned on a market-oriented basis to other users who desire access to PALs on a smaller geographic basis and will further ensure against concerns that spectrum will lay fallow in the band."¹⁴ Similarly, Verizon explains that partitioning and disaggregation "would allow market participants to decide when and if smaller license areas are desirable, without requiring the Commission to administer an auction of as many as 518,000 licenses."¹⁵ Thus, adopting this rule change not only would provide greater flexibility to PAL licensees, but also increase the ability of the Commission to manage the underlying auction.

AT&T also notes that allowing for partitioning and disaggregation will alleviate concerns that licensing on a PEA basis will result in underutilized spectrum. Secondary markets have long enabled the marketplace to determine the most effective use of spectrum. Though PEAs are larger areas than Census Tracts, they lend themselves more readily to partitioning and disaggregation. As CTIA observed, the "already splintered nature of census tract area licensing raises questions about the utility of further partitioning and disaggregation, particularly within

¹³ *Incentive Auction Order* at ¶ 801.

¹⁴ Ericsson Comments at 7.

¹⁵ Verizon Comments at 8-9.

the context of a PAL's nonrenewable, three-year term." Secondary markets, as well as the tiered structure of the 3.5 GHz band, will ensure that spectrum is being fully utilized.

D. The Commission Should Encourage Greater Participation by Making All PALs Available Regardless of the Number of Applicants

AT&T agrees with the Commission's proposal to eliminate the rule that unduly limits PALs and instead make all PALs in a given license area available for assignment, regardless of the number of applicants. As the Commission correctly observes, the "other proposed changes to PAL licenses discussed in this Notice—including longer, renewable license terms and a larger geographic area—would make PALs more similar to licenses offered in the Incentive Auction and other recent spectrum auctions."¹⁶ In those instances, there was no need to limit the number of licenses made available; thus, AT&T encourages the Commission to offer all PAL licenses for auction, even in areas where there is only one applicant. As GeoLinks explains, denying licensing solely because there is only one interested carrier "will surely create gaps in rural, sparsely populated parts of the country that could benefit from an interested service provider."¹⁷

Numerous parties correctly observe that these rules also threaten PAL licensees' ability to retain their licenses. As CTIA explains, in a license area "with two PAL licensees collectively holding seven licenses . . . if each licensee simply seeks to maintain its current operations and applies to bid for the same number of licenses that it currently holds (a total of seven), Commission policy dictates that one less PAL will be made available for auction in that census

¹⁶ 3.5 GHz NPRM, FCC 17-134, at 16-17, ¶ 42.

¹⁷ Reply Comments of California Internet, L.P. dba Geolinks, GN Docket No. 12-354, at 3 (Aug. 8, 2017).

tract.”¹⁸ Thus, a PAL licensee would be at risk of losing one of its licenses unless a third party decided to participate in the auction, increasing the number of licenses the Commission would auction. This approach breeds uncertainty, hindering investment and innovation and ultimately impeding the deployment of innovative services.

AT&T also believes that it is unnecessary for the Commission to revisit its methodology for determining mutual exclusivity by finding that GAA use is “mutually exclusive” to PAL use of the spectrum.¹⁹ The Commission can satisfy the statutory requirement for mutual exclusivity by continuing to allow potential applicants to self-select the areas in which they are interested in bidding. For example, the Commission provides bidders with the flexibility to either designate specific areas and/or licenses in which they wish to bid or designate all areas and all licenses. If more than one bidder indicates that it wishes to bid in all areas, the Commission would have mutual exclusivity in all areas, even if there only ends up being one bidder in an area. In such a situation, the bidder would be awarded the license as long as it met the minimum opening bid. This approach is consistent with the Commission’s past auction procedures and allows prospective bidders the flexibility to manage auction participation based on changing conditions in the auction. By having a consistent level of supply throughout the auction and across markets, the Commission can provide some level of fungibility for bidders that want to move across markets, thereby providing all bidders a better chance to obtain licenses.

¹⁸ Petition for Reconsideration of CTIA—The Wireless Association, GN Docket No. 12-354, at 4 (July 23, 2015).

¹⁹ *3.5 GHz NPRM*, FCC 17-134, at 18, ¶ 45.

III. THE COMMISSION SHOULD TAKE ADDITIONAL STEPS TO FACILITATE DEPLOYMENT OF NEXT-GENERATION NETWORKS IN THE 3.5 GHZ BAND

A. Allowing Licensees to Bid on Specific Channel Assignments Will Ensure Certainty in License Assignments

AT&T urges the Commission to revise the current PAL rules that allow SAS administrators to assign frequencies based on the amount of spectrum that the licensee is authorized to use in a given license area, and instead allow applicants to bid on particular channels. Effective network planning requires access to predictable spectrum allocations; however, the current framework inhibits the ability of providers to undertake that planning and will result in depressed investment in the band.

AT&T notes that permitting SAS administrators to determine the precise channel on which a PAL licensee must operate creates uncertainty in the auction process. Because incumbent services continue to operate in the band, not all channels are created equal—one channel may have the necessary characteristics that allow it to be utilized to provide innovative services such as 5G, while another may not. If a provider is unable to determine the exact channel on which it will operate, it is less likely to participate in the auction, given the complex arrangements that will be necessary for it to effectively plan its deployments. If the provider decides to participate in the auction, however, simple economics dictates that it will submit a lower bid for an uncertain asset—in this case, a “right” to a channel rather than a specific channel. The provider also is likely to invest less in that asset, as it might not fit the provider’s particular needs for network deployment or the provider may have to contend with incumbent services.

Thus, permitting PAL bidders to purchase specific spectrum blocks will provide much-needed certainty, allowing bidders to better plan their network deployments and ensuring additional investment in the band. This approach is consistent with the Commission’s practice in

previous spectrum auctions and the Commission’s recognition of the network efficiency benefits of holding contiguous blocks of spectrum and of having spectrum holdings that are consistent across market areas. AT&T agrees with Ericsson that allowing providers to bid on specific license blocks would ensure a “stable and predictable” spectrum environment.²⁰

B. SAS Public Disclosure of CBSD Registration Information Should Be Prohibited

AT&T believes that the current rules purporting to protect CBSD registration data—including extensive data regarding users’ network configuration, uses, and technical parameters—are insufficient to safeguard critical network data. The risks and potential harms associated with disclosure of this information heavily outweigh any potential benefits from making such information public.

The Commission should revise its current rule requiring SAS administrators to make Citizens Broadband Radio Service Device (“CBSD”) registration information available to the general public.²¹ Instead, the Commission should impose the same standards of protection that are applied to other critical infrastructure data. As T-Mobile recognizes, “the Commission provided no persuasive justification for making CBSD registration information available to the public to counterbalance the potential competitive and security-related harms.”²² Further, Ericsson observes that because SAS administrators are required to coordinate with each other, “members of the public can therefore work with a SAS to determine where they can deploy

²⁰ Ericsson Comments at 8.

²¹ 47 C.F.R. § 96.55(a)(3).

²² Petition for Rulemaking of T-Mobile, GN Docket 12-354, at 19-20 (June 19, 2017).

CBSDs on a GAA basis.”²³ Thus, the Commission should not allow any data to be publicly shared unless explicitly permitted under the contractual relationship between the provider and the SAS. The Commission also should require that SAS administrators use registration data only for SAS functions, such as spectrum assignment and interference management, as argued by other commenters.²⁴

C. Rigorous Performance Requirements Are Unnecessary to Ensure Widespread Use of the 3.5 GHz Band

AT&T recognizes that the Commission is required to impose performance requirements on wireless licenses to “ensure prompt delivery of service to rural areas, to prevent stockpiling or warehousing of spectrum by licensees or permittees, and to promote investment in and rapid deployment of new technologies and services.”²⁵ However, because the unique tiered structure of the 3.5 GHz band allows for opportunistic use, there are already protections in place to prevent spectrum warehousing. Further, the characteristics of the band make it suitable for the deployment of new and innovative technologies and services. AT&T therefore believes that rigorous performance requirements would be unnecessary to ensure that the spectrum in the 3.5 GHz band is being put to its best use in an efficient and effective manner.

The Commission has used a “substantial service” standard in other contexts and instituted safe harbors for licensees to meet to receive renewal expectancy. For example, the Commission defined substantial service for Personal Communications Services (“PCS”) as “service which is

²³ Ericsson Comments at 8-9.

²⁴ See *e.g.*, Comments of NCTA, GN Docket 12-354, at 17 (July 24, 2017) (noting that so long as prospective users of the band can obtain sufficient information to plan and execute their network deployments, there should be no need for public disclosure of detailed registration information).

²⁵ 47 U.S.C. § 309(j)(4)(B).

sound, favorable, and substantially above a level of mediocre service which might just minimally warrant renewal.”²⁶ In addition to PCS, the Commission has used this same standard and definition to implement performance requirements for Advanced Wireless Services (“AWS”) and Wireless Communications Services (“WCS”) licensees.²⁷ For Broadband Radio Services (“BRS”) and Educational Broadband Services (“EBS”) licensees, the Commission again adopted a substantial service standard, but also created a number of safe harbors for these licensees to satisfy that standard.²⁸

AT&T believes that a showing of substantial service for licensees in the 3.5 GHz band balances the Commission’s statutory mandate to impose performance requirements on licensees with its desire to maintain a light-touch approach that does not inhibit innovation in the band. Moreover, licensees are familiar with this standard given the Commission’s precedent, increasing the ease and likelihood of compliance. AT&T urges the Commission to refrain from adding another layer of uncertainty by adopting any new, rigorous performance requirements, potentially inhibiting participation in the auction and reducing investment in the band.

IV. CONCLUSION

AT&T has consistently supported the Commission’s efforts to make modest changes to the 3.5 GHz band licensing rules. By adopting a number of the rule proposals outlined in the 3.5 GHz *NPRM*, the Commission can provide much needed clarity and certainty to potential licensees, which ultimately will foster investment and innovation in the band. At the same time,

²⁶ 47 C.F.R. § 24.16(a).

²⁷ 47 C.F.R. § 27.14(a).

²⁸ 47 C.F.R. § 27.14(o)(1)-(3).

AT&T urges the Commission to take a measured approach to other potential rule changes and cautions against taking any action that would impose unnecessary restrictions on PAL uses.

Respectfully Submitted,

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